

A STUDY OF PERFORMES IN INDIAN SOFTWARE AND SERVICES INDUSTRY

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Abstract:

The paper focuses upon the performance of the five major software companies of India with a “Strategy” perspective. There has been a separate focus on the strategies followed by each Individual organization strategies over the period of years, and how have they been able to make mark for themselves riding on their respective strengths. A SWOT analysis has also been done for each organization separately and for the Industry as a whole to identify the plusses and minuses, the opportunities available and threats present in the external environment.

JEL classification: O3, O32,

Key words: Management, Software, Joint venturing,

“Tomorrow always arrives. It is always different. And even the mightiest company is in trouble if it has not worked for the future. Being surprised by what happens is a risk that even the largest and the richest company cannot afford, and even the smallest business need not run”. - Peter Drucker

1. Literature Survey

The objective for the literature survey was to identify the structure for the study. This was accomplished through study of various texts related to the subject (*Strategic Management: Competitiveness and Globalization* by Michael A. Hitt, R. Duane Ireland, Robert E. Hoskisson, Robert E. Hosk, *Readings In Strategic Management* by Arthur Thompson(1997), Jr. A. J. Strickland III Tracy Kramer and *Strategic Management* by Fred David, 2003). The structure thus finalized was the study of various decisions, steps and moves taken by

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the organizations on the path to growth and finally developing a SWOT analysis map in the light of the former.

The papers written in the area are mostly concerned either with the study of the sector/industry as a whole or the study(case analysis) of an individual organization. The paper by Patibandla and Peterson (2002) on the role of TNCs in the domestic software industry provides some interesting points to ponder on the performance issues of the organizations. A paper by Heeks (1998) also gave a good insight into the genesis and growth of the Indian software industry. The work by Malley and Gorman (1999) highlighting the competitive advantages and other characteristics of Irish software industry provides a good study in contrast.

2. Methodology

The methodology followed is extensive data collection from various sources (Reports and Publications) followed by a study of Strategic initiatives and SWOT analysis.

Theoretical Underpinnings: Strategies represent the actions to be executed after proper thought and planning to accomplish the long – term objectives of the organization. These objectives should be realistic, clear, understandable, quantifiable and measurable with a very inherent time orientation.

A) Integration Strategies (Vertical Integration strategies)

Forward Integration: would involve the control or ownership of intermediaries involved in delivery of the product or service viz. distributors, retailers etc.

Backward Integration: would involve the control or ownership of intermediaries involved in creation of the product or service viz. suppliers to the organization. Pursued when: 1) Present intermediaries are expensive, unreliable or incapable. 2) The industry is growing and is expected to grow in future. 3) Present intermediaries in the industry have high margins

Horizontal Integration: would involve the control or ownership of similar organization / competitors. Pursued when: 1) There is a chance of attaining a situation of clear cut leader in the industry. 2) Increased

economies of scale provide competitive advantages. 3) Industry is growing

B) Intensive Strategies

Market Penetration: Involves greater effort in marketing for increasing the market share of the current offerings (products/services) in the current market. Pursued when: 1) Present market have still more scope/potential for sales. 2) Usage rate of current customers can be increased. 3) Industry sales are increasing (though of competitors may be declining)

Market Development: Involves greater effort in marketing for launch/introduction of current offerings (products/services) in the new market. Pursued when: 1) New untapped or unsaturated market exists. 2) There is excess production capacity. 3) Basic industry is assuming global status

Product Development: Involves “perking up” the sales performance by enhancing /improving upon the current offerings (products/services) or developing new ones. Pursued when: 1) Current products are in maturity stage. 2) The industry is very dynamic and high growth. 3) Competitors have better products/ services. 4) Organization has strong R & D base

C) Diversification Strategies

Concentric Diversification: Involves augmenting the organization sales by addition of new but related products into the portfolio. Pursued when: 1) Industry is slow-growth or no-growth. 2) Introduction of new products/service would increase the consumption of current offerings. 3) New offerings have seasonal sales cycle, which would counterbalance the cycles of current/present offerings. 4) Current offerings have matured

Horizontal Diversification: Involves augmenting the organization sales by addition of new and unrelated products into the portfolio for the current customers. Pursued when: 1) Industry is slow-growth or no-growth. 2) Introduction of new products/service would increase the consumption of current offerings. 3) New offerings have seasonal sales cycle, which would counterbalance the cycles of current/present offerings. 4) Current offerings have matured

Conglomerate Diversification: Involves augmenting the organization sales by addition of new and unrelated products into the portfolio. Pursued when: Present markets for present products have saturated. Organization's core industry is on decline (in terms of sales and profits)

D) Defensive Strategies (reactive)

Retrenchment: Involves the various measures (when sales and profits are already declining) for turnaround and regrouping through reduction in assets and costs.

Divestiture: Involves hiving/selling off a function/division/unit of an organization. (Often used to raise capital or as a part of retrenchment strategy)

Liquidation: Involves selling off all the assets and tangible resources of the organization when it is no longer viable to do business.

E) Porter's Generic Strategies

Cost Leadership Strategies: Involves producing very low cost product/service for price conscious market.

Differentiation Strategies: Involves production/creation of product/service which are very unique (have no substitutes/alternatives)

Focus Strategies: Involves the production/creation of product/service for the niche market.

Note that a primary input for pursuing any or all if the mentioned strategies is the presence of resources required for the same, the primary ones being the availability of CAPITAL and HUMAN RESOURCE

Means for achieving strategies: A) Joint venturing/Partnerships.

Reasons: 1) Domestic organization with foreign organization: opportunity for making inroads in new market and culture through local expertise. 2) When diverse expertise and distinct competencies are in a position to complement the mutual strengths. 3) When risks/stakes are very high in some particular market/project. 4) In face of a big competitor two or more smaller firms can opt to compete together. 5) In case of a rapid response to some market situation which would require more than one specialty/expertise (new technology

introduction). B) *Mergers/Acquisitions/Takeovers*. Reasons: 1) Economies of scale. 2) Better resource utilization (manpower resources, production facilities). 3) Combating seasonality and various other trends in demand of the product/service. 4) For access to new products/services, new technology, new markets, suppliers, distributors.

3. The organizations: data and strategies

The Organizations selected were on the basis of their performance and their visibility in the national Software/IT map. (For the reasons of information and data availability only the Public Limited companies were finally short listed for the purpose of the study. To cover the wider genre a product company was also made a part of this study, which incidentally is also the lone world-class player from the product segment: 1). Infosys Technologies Limited. 2). Wipro (Technologies) Limited. 3) HCL Technologies Limited. 4) Satyam Computer Services Limited. 5) I-Flex Solutions Limited

Infosys Technologies Limited:

Start-up Year: 1981.

Chairman/CEO/M.D: Mr. N Nandan Nilekani

No. Of Employees: 21000+

Industry: Software

Products/Services: Customized software services and software products, ITES

Services: Content management, Application servers, Security infrastructure, Middleware / Adapters, Personalization technologies, Industry-specific business applications, Product engineering services, Storage area network, BPM, CRM, KM, Mobile computing and M strategy, SCM, IT strategy, Infrastructure management services, Consulting and Strategy, Architecture and Integration, Custom Systems Development, Re-engineering and migration services, Maintenance and Support

Product: Enterprise Banking solution, Finacle

Turnover: Mar 2003, 36226.90 Rs. Million

Profit: 9579.30 Rs. Million

No. Of Customers: 350+

Share Holding Pattern as on '31/12/2003'		
Major Holder	Number Of share	Percentage
Promoters	17691470	26.62
Institutional Investors	32191448	48.44
Other Investors	10593207	15.94
General Public	5979867	9.00

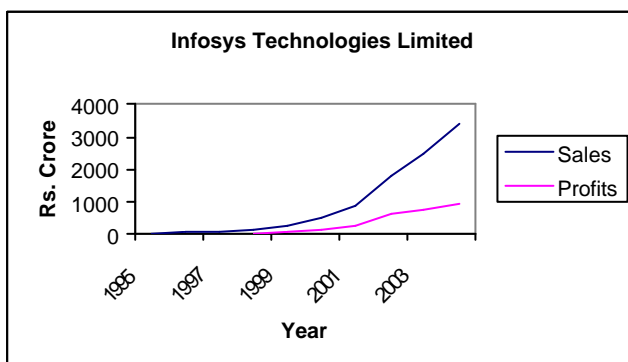
*source : www.indiaonline.com

Major Strategies Adopted over the years:

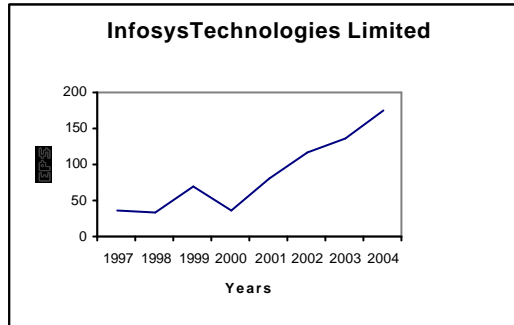
Infy followed the strategy of concentric diversification where in it started with purely consulting business and then widened its portfolio to software maintenance, re-engineering and downsizing applications in the existing market segment. Another act of this diversification strategy was the entry into distribution (DMAP) and banking product (Finacle) segments. Establishment of a separate software testing unit which would cater to self , competitors as well as the customer's is another example of the such strategy.

Figures (in Rs. Crores, Adjusted for inflation – based on CPI)

*Author's computation. One Crore=10 million.



Figures (in Rs).*Author’s computation



An example of horizontal/conglomerate diversification is Infosys’s entry into BPO/BPM segment through its subsidiary “Progeon”. Various market penetration strategies have been a constant fixture of Infosys’s strategic maneuvers over the years. It has expanded its market from U.S to Europe, Middle-East & Far-East Markets and to Africa, Australia etc. (this include setting of f-shore development centers, support & maintenance offices, Sales & Marketing offices to Liaison centers). An excellent example of market development is Infy’s foray in Automotive systems & life sciences from its traditional stronghold in verticals like & Distribution, Banking, Telecommunication and Manufacturing sectors. Acquisition (Integration Strategy) has been the most popular mode of development/growth being pursued by the Indian companies including Infosys (stake in Onmobile, USA, Expert Information services, Australia etc.)

SWOT Analysis:

Strength: Excellent Brand Image, Reservoir Of Best Human Resource, One Of the most Respected Organizations, Best HR Policies, Very Good Knowledge bank, Great returns to shareholders, Increasing profits and EPS

Weakness: Large Bench may lead to high carrying costs, High costs of Training & Skill Up gradation

Opportunity: Leveraging the performance in U.S & Few European Markets to capture other markets of Europe, China, Australia, Japan, Middle-East & Far East.

Threat: Strong Local and International Competition, with the similar strengths and delivery models and may be lower costs/billing rates.

Wipro Technologies:

Start-up Year: 1994

Chairman/CEO/M.D: Mr. Azim Premji

No. Of Employees: 11000+

Industry: Software

Products/Services: Customized software solutions/services and software products, ITES

Services: IT services (Application development and maintenance, Architecture consulting, B2E, BI & DW, BPM, CRM, eBusiness, ERP, e-procurement, B2B, Enterprise security, Package implementation, PLM, SI, SCM, EAI, Technology infrastructure services, web services, Product Design Services (Hardware services, system software development, Testing verification and validation, support services), BPO (customer interaction services, finance and accounting services, payment services, Industry application services, HR processing services, supply chain services, knowledge services)

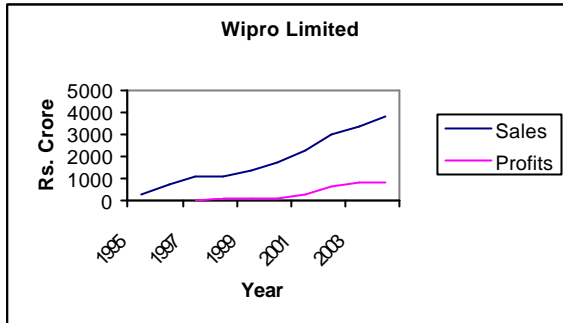
Turnover: Mar 2003, 11,000+ Rs. Million (Mar 2004 11500+)

Profit: Rs. Million. *No. Of customers:* 300+

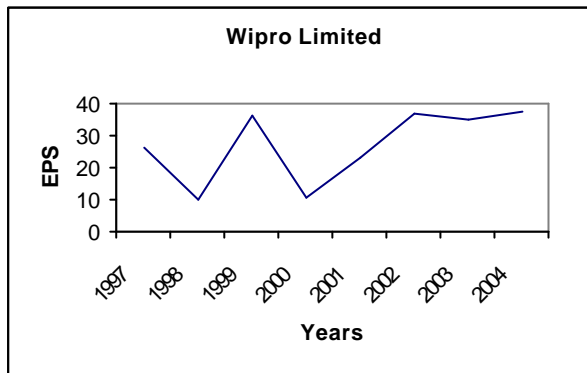
Share Holding Pattern as on '31/12/2003'		
Major Holder	Number Of share	Percentage
Promoters	195127110	83.88
Institutional Investors	10770201	4.63
Other Investors	11194813	4.81
General Public	15536435	6.68

*source : www.indiaonline.com

Figures (In Rs. Crores, Adjusted for inflation – based on CPI)
 *Author’s computation



Figures (In Rs.)*Author’s computation



Major Strategies Adopted over the years:

Wipro Ltd. is one of the most versatile IT organization in India, starting with its presence in the hardware segment it has quickly identified the opportunity in the software field and has been making the most of the head start. Thus by following the (conglomerate) diversification route it has strived to become a complete IT solutions company.

Another example of diversification (horizontal) is expansion of services (called *service line expansion*) from IT & IS consulting to E-Business Transformation, e-commerce, Web Enabling ERP, Data

warehousing, CRM and SCM. It has also diversified to the field of Internet service providers.

Apart from the above Wipro has several marketing arrangement with some of the major players in the software industry for *sales/marketing & servicing* of their applications in various markets, an example of horizontal diversification strategy (NAVISION, For ERP solutions, CITRIX systems US for networking softwares, Witness systems US for eQuality browser based solutions, Sistina Software Inc For services to their customers in India , Asia Pacific & West Asia).

Foray into the BPO sector through the acquisition of “Spectramind” is a growth strategy by the route of conglomerate diversification while launching of 01markets.com as a portal for IT industry is the pursuance of horizontal diversification path to growth.

Wipro has actively followed the market development strategy through out its life cycle, a sure shot way to increased revenues and profits it has expanded its operations from U.S, to European countries, Asia-Pacific, Middle East, China and Australia specially after the 9/11 tragedy.

SWOT Analysis:

Strength: World Class Quality Processes, Core Technology Focus, Dynamic Top Management, Excellent Relationship Management, Brand Image

Weakness: Very Diversified Businesses, Organizational complexity can cost it the first mover advantage, Reducing profits and reducing EPS a cause of concern, More than 80 % of the shares with the promoters could be a cause of concern

Opportunity: With competitive billing rates, the slowdown is actually a time when the company can distance itself from the competition

Threat: Competition from both traditional and new players both Local and Foreign

HCL Technologies Limited:

Start-up Year: 1994

Chairman/CEO/M.D: Mr. Shiv Nadar

No. Of Employees: 12000+

Industry: IT solutions

Products/Services: Technology development, networking, software product engineering and applications engineering

Services: Technology-led services (digital signal processing , embedded software, storage area network , system software, VOIP, middleware, wireless technology, product data management, content delivery management, security, validation and verification services) ,Practice-led services (ERP, CRM , B2B, SCM EAI, EAT enterprise application integration & testing, IT infrastructure services, Internet technology) Application-led services (application development, application management), ITES (process support services, contact center, sales and marketing services).

Turnover: Mar 2003, 8717.30 Rs. Million

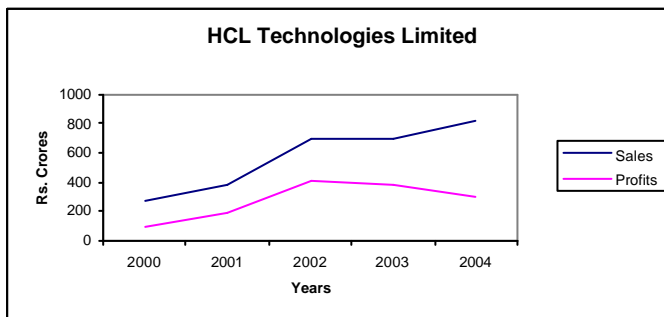
Profit: 3124.70 Rs. Million

No. Of customers: 385+

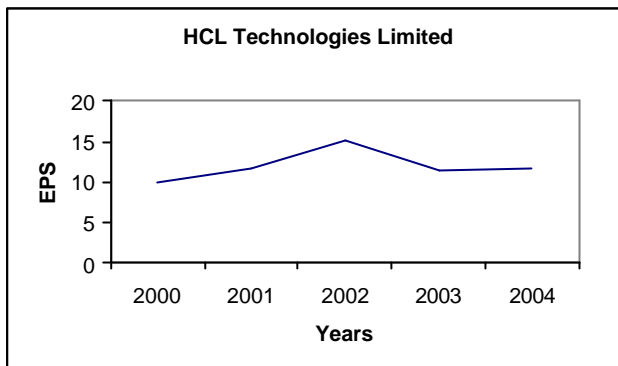
Share Holding Pattern as on '31/12/2003'		
Major Holder	Number Of share	Percentage
Promoters	225846968	76.40
Institutional Investors	42204214	14.28
Other Investors	16837772	5.70
General Public	10709406	3.62

*source : www.indiaonline.com

Figures (In Rs. Crores Adjusted for inflation – based on CPI). *Author’s computation



Figures (In Rs.).*Author's computation



Major Strategies Adopted over the years:

HCL is one organization, which is in a way similar to Wipro in the sense that it too had a strong presence in the hardware segment before it joined the software wagon. Unlike wipro IT has been sole area of focus for the Shiv Nadar controlled company. Diversification into software industry was the first big step the organization took and even though it has a decent presence in the IT H/W map of India it is the IT and ITES units which have been the main divers in recent years. It started its software practices as a technology development service provider and subsequently forayed into strategic management consulting, Internet service provider's business, increased its product and service base(Product Development Strategy), and also gone for distribution, support and maintenance of other player's solutions and services (Broad Vision Inc.,USA and Questa Corp.,). – Diversification strategies at work (Concentric, Horizontal, and Conglomerate). Design and application support for Vitesse, Demand Chain management solutions as a part of web enabling applications business, entry into retail verical and entry in ITES business (E-Serve, the BPO outfit) are other examples of Product/Service Development (i.e Intensive Strategy) and Diversification strategies followed by HCL technologies. HCL technologies has also strived for market development strategy for growth and have expanded into various markets of Americas, Europe, China and Japan.

SWOT Analysis:

Strength: Proven high-end technology capabilities and strong offshore business model, Wide Portfolio (Hardware & Software Expertise)

Weakness: High dependence on US-centric clients, exposed to client risk with more than 30% revenues coming from Top 10, high % of shares with the promoters a cause of concern, Reducing profits despite revenue growth (Imply high costs) and EPS

Opportunity: European Markets, Moving up the value chain, from application development to software engineering, networking services and technology development to strategy consulting.

Threat: Strong Local and International Competition for The Same Target Market

Satyam Computer Services Limited:

Start-up Year: 1987

Chairman/CEO/M.D: Mr. B Ramalinga Raju

No. Of Employees: 9000+

Industry: Software

Products/Services: Software solutions and services

Services: Technology Solutions, Data warehousing& Business Intelligence, BPO, Consulting and Enterprise solutions, Embedded services, Engineering solutions, ERP, GIS, IT Outsourcing, Managed IT services, Network and system Integration, Quality Consulting, Silicon design services, Enterprise storage solutions.

Turnover: Mar 2003, 20236.51 Rs. Million

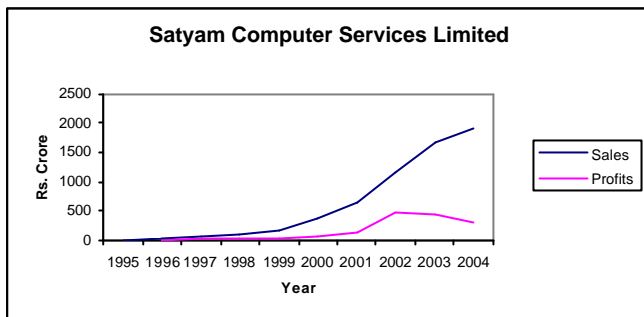
Profit: 4598.80 Rs. Million

No. Of customers: 260+ in 43 countries

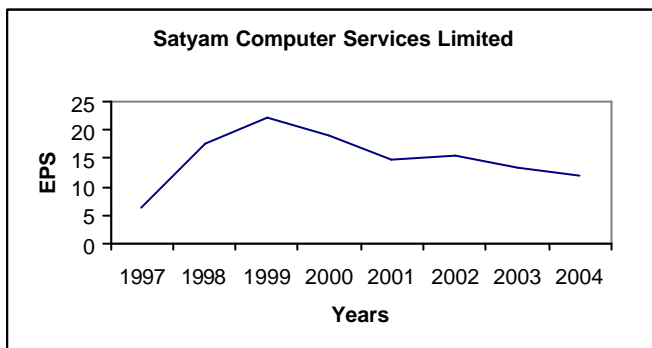
Share Holding Pattern as on '31/12/2003'		
Major Holder	Number Of share	Percentage
Promoters	57796901	18.30
Institutional Investors	199715338	63.22
Other Investors	43163912	13.66
General Public	15216696	4.82

*source : www.indiainfoline.com

Figures (In Rs. Crores Adjusted for inflation). *Author's computation



Figures (In Rs.), *Author's computation



Major Strategies Adopted over the years:

Satyam comp services started its operations as a software development and services outfit and later on it has diversified its operations to product maintenance and support services. As with all other major software cos in India it has also identified the ITES as the future area of growth joined the ITES/BPO bandwagon through launching of Nipuna services limited. Over the period of years Satyam has followed the path of growth (Diversification) by expansion of its operations in different verticals and now it covers various areas in Finance markets, Automotive, Aviation, Insurance, Healthcare and bio-informatics industry. Growth has also been in terms of markets/geographies (Market Development) where the operations have increased from US, Canada (Americas), Sweden, Germany

(Europe) to Japan Australia, China, UAE (Middle-East), Singapore & Malaysia (Far-East). It has also entered in online shopping through www.sifymall.com which was earlier a portal

SWOT Analysis:

Strength: Expertise on wide range of technologies, Management Focus, Organization Structure

Weakness: Non-performing units/subsidiaries, Lacking International Brand Image, Reducing profits show a high TCO, Reducing EPS depict a non-favorable shareholder return may result in a negative market image.

Opportunity: Various Markets In Europe, Listing on the NYSE should give a better branding in the US

Threat: Industry slowdown could reflect poorly on margins and growth.

I-FLEX SOLUTIONS LIMITED:

Start-up Year: 1989

Chairman/CEO/M.D: Mr. Rajesh Hukku

No. Of Employees: 2700+

Industry: Software & Services

Products/Services: Banking and financial software products, and related consultancy and development services

Products: Flexcube, Reveleus, Promotr, Microbanker

Services: Turnkey Solutions, ASP Services, Technology Deployment and management services, e-business, CRM, Business Intelligence

Turnover: Mar 2003, 3200.91 Rs. Million

Profit: 1743.75 Rs. Million

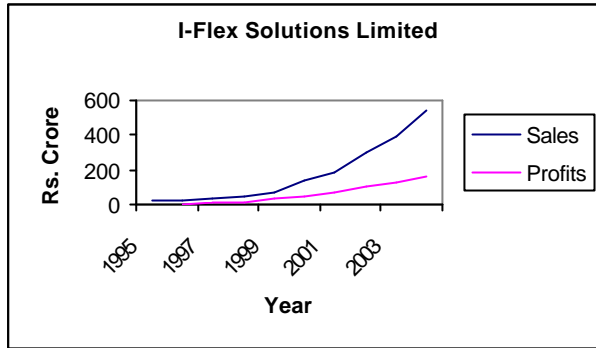
No. Of Customers: 450+ in 100 countries

Share Holding Pattern as on '31/12/2003'		
Major Holder	Number Of share	Percentage
Promoters	32236000	43.17
Institutional Investors	9745712	13.05
Other Investors	7061024	9.46
General Public	25632264	34.33

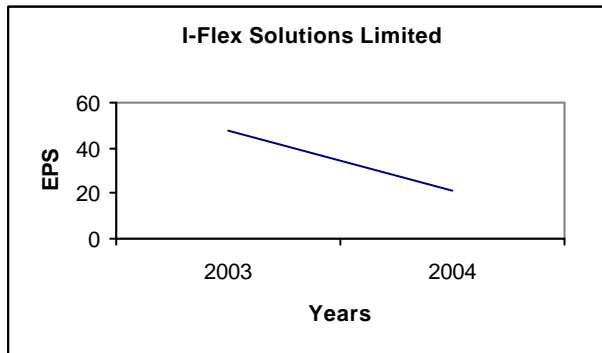
*source : www.indiainfoline.com

Figures (In Rs. Crores Adjusted for inflation – based on CPI)

*Author’s computation



Figures (In Rs.)*Author’s computation



Major Strategies Adopted over the years:

The only world class product firm from India (known as the “product king”), it has the the maximum no. for clients and maximum installations worldwide for its banking solution. An offshoot of Citibank, the company enjoys a considerable muscle and backing in term of assured market (>30%) from its parent company. Primarily recognized for its product the organization has leveraged its strength and diversified into providing turnkey Solutions, ASP Services (through Flexcube), Technology Deployment and

management services, e-business. Of particular significance is its foray into the ASP market

Starting from access to various markets provided through Citibank i-flex has its presence in over 100 countries across the globe.

Separation of Product division from Business Intelligence and analytics division (Reveleus) not only served as a means of growth but also helped i-flex to have distinct focus on each of these areas

SWOT Analysis:

Strength: A very powerful global brand, Numero Uno in its product segment, An extremely resourceful back-up/ parent company, Financial muscle

Weakness: Expertise in one industry vertical only, Relative small size (as compared to other product companies)

Opportunity: GlobalMarket, Scope for diversification in related areas

Threat: Competitive alliances

4. Stages of growth of this industry

Based on the study done on the performance of top players in the Indian software industry which represent the character of the industry to a great extent we can say that the strategies adopted by the Indian organization in software products/services Industry, primarily consist of the following two major heads, which focus upon the product/services offering of the organization and its target market(s) viz. Intensive Strategies and Diversification Strategies.

This industry is also characterized by various alliances, tie-ups, joint ventures, strategic alliances and Acquisitions (Integration Strategy) both in domestic and foreign markets in related as well as unrelated product/service segment. Market Development strategy to growth has been the mantra for most of the software organizations who have primarily been US centric, consequently we see a lot of interest in European, Middle-East & far East Asia, Africa, Australian and other markets world over

The genesis and the growth of this industry can be divided into following Stages:

Stage I: Starting UP.

Prevailing conditions: 1) Command and control economy. 2) Import restrictions. 3) Taxes. 4) Poor infrastructure

Strategy: 1) Onsite focus. 2) Few large customers. 3) Indirect sales through multiple channels

Stage II: The Growth

Prevailing situation: 1) Rationalization of taxes & tariffs. 2) Export incentives. 3) Abolishing Licenses and abolishing wealth tax on productive assets. 4) Foreign exchange reforms. 5) Free pricing of issues and entry of FIIs

Strategy: 1) Global benchmarking. 2) Global delivery model: a) Do work where it makes economic sense and reduce the total cost of ownership. b) Efficient management of resources spread across different geographical locations. 3) Employee retention. 4) Investment in sales and marketing. 5) Developing attractiveness for investors, customers as well as employees.

Stage III: The Acceleration

Prevailing Conditions: 1) Market: a) Globalization, deregulation & consolidation are changing business fundamentally. b) Increasing competition from low cost economies. 2) Technology: a) Availability of higher bandwidth and popularity of Wireless access applications and devices. b) Increased work and development in the field of web connected non-pc devices. 3) Focus on Outsourcing because of following considerations: a) Time-to-market. b) Internal resource shortage. c) Cost control. d) Complexity of IT. d) Improved vendor capabilities. e) Focus on core-competency.

Strategy: 1) Growth through Mergers /Acquisitions and Partnerships. 2) Move towards the top-end of the value chain

5. The indian software industry – present and the future

Following is the SWOT analysis of the software industry as a whole in India which clearly provides not only an overview of the current situation but also a future roadmap for Indian companies

Strengths: 1) Large Availability of Skilled manpower. 2) Low TCO (Total cost of operations). 3) Government Support. 4) Management Experience. 5) Global Delivery Model. 6) Time Zone Benefits. 7) Growing Domestic Market

Weaknesses: 1) Small Share of World Market. 2) Very High reliance on the U.S Market. 3) Low Financial Muscle. 4) Small Size. 5) Majority of Work Focused on The Low End of Value Chain. 6) Little or No Presence In The World Software Product Map. 7) Bureaucracy.

Opportunities: 1) Whole World As A Target Market. 2) Outsourcing. 3) New verticals. 4) Moving Towards High-End Of Value Chain (Cutting Edge & Mission Critical Application Development – Greater Source Of Revenue, Differentiation & Competitive Advantage). 5) Exploiting The Brand Image

Threats: 1) Increased Competition (from similar economies e.g China, Philippines, Ireland). 2) Political And Public Pressure Against Outsourcing. 3) MNCs successfully copying the outsourcing model. 4) Increasing fight for skilled Human Resource and related HR Issues.

The picture, which emerges from the above analysis, very clearly shows that the Indian software industry is very firmly on its road to maturity. This is more than evident from the rise, which the major Indian organizations are making on the value curve. A very remarkable performance in the software product segment by the current crop of Indian organizations coupled with work done by software majors on the cutting edge technologies on real time applications. All the software majors of the world setting their development units in India (which are) working on the latest applications and outsourcing of a part of such work to Indian organizations is a testimony to the growing stature of these organizations. The apparent concern surrounding the threats from economies like China, specially in areas of outsourcing is actually nothing more than a wake –up call for future challenge; the reason as we have seen from the above is that Indian companies are far ahead of China in terms of the position in the value curve and the quality of work. Though this is true but this truth is variable not lasting enough for Indian companies to be complacent because of the huge efforts put by the economies like China who want a bigger share of the pie. Thus Indian organizations have to continuously strive to get higher (on the curve), better (in productivity/output) and bigger (worldwide presence) on the road to exponential growth and to thwart any potential threats.

Source of Data:

CMIE (Centre For Monitoring Of Indian Economy)

www.indiainfoline.com

NASSCOM publications and reports (2003&2003)

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